which the measurement results are attributed; the secondary radiation excited in this zone is transported to one or more detectors (6); the target area (7) of object (5) is scanned by moving the said zone; judgment on the substance density of an object in the current point (4) is made based on the population of intensity values of the secondary radiation, which are obtained with the help of one or more detectors (6) and which are determined concurrently with coordinates of the current point (4) within the X-rays concentration zone, to which the measurement results are attributed; and the above density values are used together with respective coordinate values to build up a density distribution picture for the target area (7) of object (5).

21. (New) Method according to claim 20, wherein the X-rays concentration is done with the help of one or more collimators (13, 18) using a respective number of space-apart X-ray sources (1); excited secondary radiation is transported to one or more detectors (6, 20) with the help of one or more collimators (15, 19), and all collimators are oriented so that the axes of their central channels would cross in the current point, to which the measurement results are attributed.

22. (New) Method according to claim 20, wherein the X-rays concentration is done using one or more X-ray hemilenses (21) transforming divergent radiation from a respective number of space-apart X-ray sources (1) into quasi-parallel radiation; the excited secondary radiation is transported to one or more detectors (6, 20) using one or several X-ray hemilenses (22, 23) focusing this radiation on the detectors, or forming quasi-parallel radiation; in this instance all X-ray hemilenses are oriented so that their optical axes would cross in the current point, to which the measurement results are attributed.

23. (New) Method according to claim 20, wherein X-rays concentration is dosing one or more X-ray hemilenses (21) transforming divergent radiation from a respective number of space-apart X-ray sources (1) in quasi-parallel radiation; the excited secondary radiation is transported to one or more detectors (6) using one or more X-ray lenses (3) focusing this radiation on detectors (6); in this instance, all X-ray hemilenses and lenses are oriented so that their optical axes would cross in the current point, to which the measurement results are attributed.

24. (New) Method according to claim 20, wherein X-rays concentration is done using more X-ray hemilenses (21) transforming divergent radiation from a respective number of space-apart sources (1) into quasi-parallel radiation; the excited secondary radiation is transported to one or more detectors (20) using one or more collimators (19); in this instance X-ray hemilenses and collimators are oriented so that the optical axes of all X-ray hemilenses and central channels of all collimators would cross in the current point, to which the measurement results are attributed.

25. (New) Method according to claim 20, wherein X-rays concentration is done using one or more space-apart X-ray sources (1) and a respective number of X-ray lenses (2) focusing divergent X-rays from each of the sources (1) in the current point 4), to which the measurement results are attributed; the excited secondary radiation is transported to one or more detectors (6) using X-ray lenses (3) focusing this radiation on detectors (6) and having a second focus in the said current point.

26. (New) Method according to claim 20, wherein X-rays concentration is done using one or more space-apart X-ray sources (1) and a respective number of X-ray lenses (2) focusing divergent X-rays from each of the sources (1) in the current point, to which the measurement results are attributed; the excited secondary radiation is transported to one or more detectors (6, 20) is done using collimators (15, 19), which are oriented so that the optical axes of their central channels would cross in the said current point.

27. (New) Device for producing the image of the internal structure of an object with X-rays, comprising a means (10) for positioning the object under study (5), an X-ray optical system (8), a means for relative movement of the means (10) for positioning of the object under study (5) versus the X-ray optical system (8), a means (12) for data processing and imaging wherein the X-ray optical system (8) contains one or more X-ray sources (1), an X-rays concentration means (2) for concentration of radiation from the said one or more X-ray sources (1) in the zone located inside the target area (7) of object (5) and covering the current point, to which the measurement results are attributed; one or more means (3) for transportation of excited secondary radiation and mounted close to their exit X-rays detectors (6) for the said secondary radiation, where the output from these detectors is connected to the means (12) for data processing and imaging; the means (10) for positioning of the object under study (5) and the X-ray optical system (8) are connected to the sensors (11) designed for determining the coordinates of the current point, to which the measurement results are attributed,, and those sensors are connected through their outlets to the means (12) for data processing and imaging.

28. (New) Device for producing the image of the internal structure of an object with X-rays, comprising a means (10) for positioning the object under study (5), an X-ray optical system (8), a means for relative movement of the means (10) for positioning of the object under study (5) versus the X-ray optical system (8), a means (12) for data processing and imaging wherein the X-ray optical system (8) contains one or more X-ray sources (1), an X-rays concentration means (2) for concentration of radiation from the said one or more X-ray sources (1) in the zone located inside the target area (7) of object (5) and covering the current point, to which the measurement results are attributed; one or more means (3) for transportation of excited secondary radiation and mounted close to their exit X-rays detectors (6) for the said secondary radiation, where the output from these detectors is connected to the means (12) for data processing and imaging; the means (10) for positioning of the object under study (5) and the X-ray optical system (8) are connected to the sensors (11) designed for determining the coordinates of the current point, to which the measurement results are attributed,, and those sensors are connected through their outlets to the means (12) for data processing and imaging, wherein the X-ray optical system contains more X-ray sources (1; 17); each of the X-rays concentration means designed for concentration of radiation from the said sources, and each of the means for transportation of the secondary radiation excited in the said zone to detectors (6; 20) is made as a collimator (13, 15; 18, 19), having its channels oriented towards the above X-rays concentration zone (16) and the optical axes of the central channels of all collimators cross in the current point, to which the measurement results are attributed.

29. (New) Device according to claim 28, wherein said one or

more X-ray sources (1) incorporated in the X-ray optical system are quasi-point sources and collimators (13, 15) have channels that are focused on these sources and fan towards the means for positioning the object (5) under study; between the exit of each X-ray source (1) and entrance to a respective collimator (13), there is a screen (14), which has an opening.

30. (New) Device according to claim 28, wherein said one or more X-ray sources (17) incorporated in the X-ray optical system are extended X-ray sources and collimators (18, 19) have channels that narrow down towards the means for positioning the object under study.

31. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point X-ray sources; each of the X-rays concentration means for concentration of the radiation is made as an X-ray hemilens (21) transforming divergent radiation from a respective source (1) into quasi-parallel radiation; and each of the means for transportation of the excited secondary radiation to detector (6) is made as an X-ray hemilens (22) focusing this radiation on detector (6); in this instance, the optical axes of all X-ray hemilenses cross in the current point, to which the measurement results are attributed.

32. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point X-ray sources; each of the X-rays concentration means designed for concentration of radiation is made as an X-ray hemilens (21) transforming the divergent radiation from a respective source (1) into quasi-parallel radiation; and each of the means for transportation of excited secondary radiation to

detector is made as an X-ray hemilens (23) forming quasi-parallel radiation and having its focus in the X-rays concentration zone (16); in this instance the optical axes of all X-ray hemilenses cross in the current point, to which the measurement results are attributed.

33. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point; each of the X-rays concentration means for radiation concentration in zone (16) that includes the current point, to which the measurement results are attributed, is made as an X-ray hemilens (21) transforming divergent radiation from a respective source (1) into quasi-parallel radiation; and each of the means for transportation of excited secondary radiation to the detector (6) is made as an X-ray lens (3) focusing this radiation on the detector (6) and having a second focus in the X-rays concentration zone (16); where the optical axes of all X-ray hemilenses and lenses cross in the current point, to which the measurement results are attributed.

34. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point; each of the X-rays concentration means for radiation concentration is made as an X-ray hemilens (21) transforming divergent radiation from a respective source (1) into quasi-parallel radiation; each of the means for transportation of excited secondary radiation to detector (20) is made as a collimator (19), its channels fanning towards a respective detector; where the optical axes of all X-ray lenses and hemilenses and central channels of collimators cross in the current point, to which the current measurement results are attributed.

35. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point; each of the X-rays concentration means for radiation concentration is made as an X-ray hemilens (21) transforming divergent radiation from a respective source (1) into quasi-parallel radiation; each of the means for transportation of excited secondary radiation to detector (6) is made as a collimator (15), its channels coming together towards a respective detector; where the optical axes of all X-ray lenses and hemilenses and central channels of collimators cross in the current point, to which the measurement results are attributed.

36. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point; each of the X-rays concentration means for radiation concentration is made as an X-ray lens (2) transforming divergent radiation from a respective source (1) into quasi-parallel radiation; each of the means for transportation of excited secondary radiation to detector (6) is made as an X-ray lens (3), focusing this radiation on a respective detector; where the optical axes of all X-ray lenses cross in the current point, to which the measurement results are attributed.

37. (New) Device according to claim 27, wherein said one or more X-ray sources (1) incorporated in the X-ray optical system are quasi-point; each of the X-rays concentration means for radiation concentration in zone (16) that includes the current point, to which the measurement results are attributed, is made as an X-ray lens (2) focusing divergent radiation from a respective source (1); each of the means for transportation of excited secondary radiation to detector (6) is made as a collimator (15), its channels coming together towards a